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Abbreviation	Abbreviated Phrase
ON	ON Semiconductor Corporation and Semiconductor Components Industries, LLC
ON Corp.	ON Semiconductor Corporation
PI	Power Integrations, Inc.
SCI	Semiconductor Components Industries, LLC
The '211 patent	U.S. Patent No. 7,102,211
The '851 patent	U.S. Patent No. 6,107,851
The SR patents	U.S. Patent Nos. 7,440,298, 7,564,705, and 7,796,407
UDF	Undisputed Fact

NATURE AND STAGE OF THE PROCEEDINGS¹

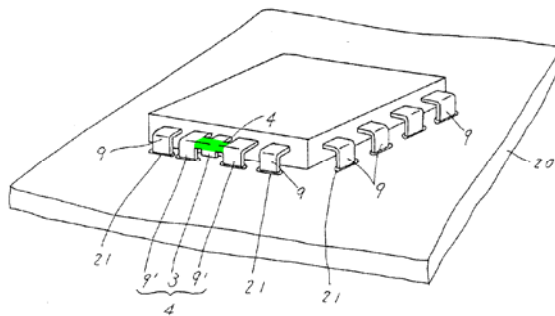
PI seeks summary judgment on several discrete issues in order to streamline the case.

PRELIMINARY STATEMENT

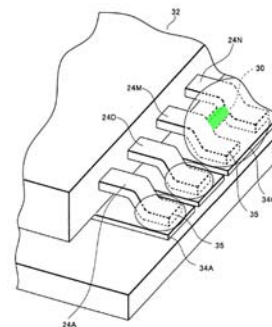
ON's Infringement Claims re the '211 patent:

SCI acquired the '211 patent when it purchased Sanyo Semiconductor 5 years after the patent issued. The '211 patent claims an alleged improvement to heat dissipation techniques in a semiconductor device (A99, 2:8-12), yet no Sanyo or ON product has ever practiced the '211 patent in any of the 13 years since the patent issued. (A204; A212.)

In fact, the '211 patent is not an innovation at all. The heat dissipation technique described in the '211 patent had existed for years before the '211 patent was filed. Numerous skilled artisans developed the techniques described in the '211 patent to improve heat dissipation in semiconductors as early as the 1980s. Thus, for example, an inventor working for Hitachi Semiconductor in 1986 disclosed connecting adjacent leads into a “heat dissipation fin”—the very same innovation claimed 17 years later in the '211 patent (shown in green for both):



Shimizu '752, Fig. 2a (A114) (1986)



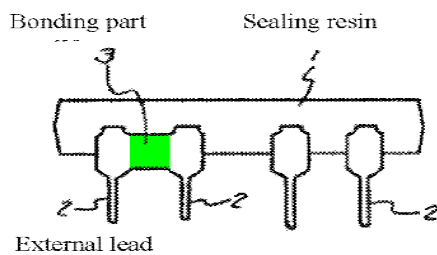
'211 patent, Fig. 4 (A624) (2003)

There are no disputes about the physical structure of Shimizu '752, which is the focus of PI's motion for summary judgment of anticipation. After the Court's claim construction, the claims of

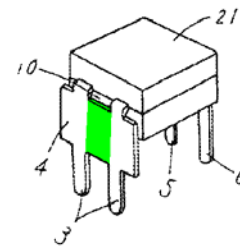
¹ The Court is familiar with the summary judgment standard, so PI will not repeat it here. *See Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 763 F. Supp. 2d 671, 674-75 (D. Del. 2010). Relevant legal standards are further discussed in the argument sections below.

the '211 patent are anticipated by Shimizu '752. The only dispute stems from ON's attempt to ignore the claim construction and fabricate a dispute by trying to import non-existing requirements into the claims.

ON's '211 patent is objectively obvious. The '211 patent discloses as "prior art" all elements of the asserted claims *except* for the claimed coupling portion—indeed, the "coupling portion" is the '211 inventors' only cited innovation. (See Figure 4 above.) But numerous artisans taught adding a coupling portion to a semiconductor device to improve its heat dissipation characteristics.



A124 ("Hoshino"), Fig. 1 (1987)



A630 ("Otaka"), Fig. 3 (1986)

In short, the '211 patent is nothing more than the predictable use of prior art elements according to their established functions.

In addition, one-half of the accused products do not infringe. The claims require "discrete leads each having an end extending near" an island upon which a semiconductor is mounted, and ON's expert failed to provide any evidence on the claim limitation "extending near." These products cannot, as a matter of law, infringe. Nor has ON ever developed a doctrine of equivalents theory. With no evidence or analysis in the record on doctrine of equivalents, even though ON bears the burden of proof, it is now time to enter judgment for PI on this claim.

In conclusion, ON is attempting to assert a patent that is anticipated, obvious, and not infringed, with a willfully flawed damages analysis, in a desperate counter-attack after being found to be a willful infringer of PI's patents.

ON's Infringement Claims re the SR patents:

ON's charge of infringement of the '298, '705 and '407 SR patents equally overreaches. ON acquired these patents—listing Tom Yang as the inventor—in its purchase of Fairchild and System General. Like Fairchild's assertion of previous Yang patents before it, ON's present assertion is equally meritless, including assertions against admittedly non-infringing uses and arguments that are clearly precluded by the Court's claim constructions.

In particular, ON's infringement claims encompass all sales of the accused InnoSwitch and InnoSwitch-3 product families, yet ON's own technical expert admits that (1) the asserted claims do not read on the chips themselves and (2) the chips may be used with a diode rectifier and, when so used, the resulting power supply does not infringe any asserted claims. Because there is no dispute that use of an InnoSwitch with a diode and not a SR FET is outside the scope of the asserted claims, PI is entitled to partial summary judgment that such uses do not infringe.

With regard to the chips themselves, ON's assertion of infringement stretches the claims so far as to divorce them completely from the actual teaching of the asserted patents. ON attempted to further this plan by proposing claim constructions lacking any basis in the intrinsic evidence and which read all meaning out of the claim language. The Court correctly recognized this tactic and, instead adopted PI's proposed constructions, including for two key claim limitations; the “magnetized voltage” limitation of the '298/'705 patents and the “polarity” limitation of the '407 patent. Rather than conceding that, as properly construed, the asserted claims had no chance of reading on the completely different SR control circuits in the accused InnoSwitch products, ON maintained its claims by simply ignoring the Court's constructions. Because the structure and operation of the accused chips is not in dispute, and the properly construed claims clearly cannot read on the accused products, summary judgement of non-infringement should be granted.

ON's Damages Claims:

As with claim construction, ON's damages claims overreach. ON wrongly claims pre-suit damages for alleged infringement of two patents that cover ON products that ON failed to mark; ON claims damages for indirect infringement for time periods during which PI had no awareness of any of the asserted patents; and ON improperly includes indirect infringement in its pre-suit damages base in order to inflate its damages by more than 10 times. The Court should enter partial summary judgment in PI's favor on these issues and restrict damages to the correct period for trial.

ON's Infringement of PI's '851 Patent:

Rather than due to any actual merit, ON brought this case in an attempt to distract from its own liability for infringing PI's valuable intellectual property. As regards PI's '851 jitter patent in particular, ON attempts to avoid this liability by raising and relying on the identical defenses previously raised by its predecessor Fairchild; defenses which were rejected by previous juries, this Court and the Federal Circuit. Just like when raised by Fairchild, these defenses lack merit, but ON should not be able to burden the Court and another jury with re-litigation of the identical factual and legal issues. Because ON is bound by the prior results due to its relationship with Fairchild, PI is entitled to summary judgment of issue preclusion, including judgment that ON's accused products infringe the '851 patent and the asserted claims are not invalid.

MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON'S '211 PATENT**I. THE '211 PATENT IS INVALID AS ANTICIPATED BY SHIMIZU '752.**

Japanese Unexamined Patent Application Publication 61-53752, published March 17, 1986 ("Shimizu '752" (A111)), anticipates claims 1 and 9 of the '211 patent. To fabricate a dispute, ON ignores the claim construction and asserts that the leads of Shimizu '752 are not "common leads" because they lack an electrical function. Because the claims as construed by the Court do not require "common leads" to have an electrical function, there is no actual material dispute of fact.

Statement of Undisputed Material Facts²

1. Shimizu '752,³ like the '211 patent, focuses on improving the thermal performance of a semiconductor device. (A111 (“An object of the present invention is to improve heat conduction properties”); A114, Figs. 1, 2a; A448, ¶ 246.) 2. And like the '211 patent, Shimizu achieved this goal by coupling two electrically connected leads having a common electrical potential (shown in green in Figures 1 and 2a below). (A450, ¶¶ 258-59; A451, ¶ 266.)

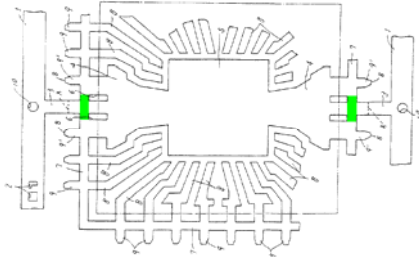
3. PI’s expert stated that Shimizu '752 discloses all elements of asserted claims 1 and 9. (A447, ¶ 244; *see generally* A448-452 (listing support for claim elements); A472-491 (same).)

4. He also opined that the text and Figure 1 of Shimizu '752 describe a semiconductor device with a plurality of discrete leads with ends extending near an island 5 (“tab 5 for mounting”) supporting a semiconductor, and two “heat-dissipating fins” 4, each coupling two parts referred to as “outer leads” and labeled “B” and 9’, to the island; each of those plurality of leads is a common lead that begins inside and extends out of the resin-sealing body. (A112-14, Figs. 1-2a; A449, Fig. 44; A569-570, ¶¶ 122-25.) 5. As shown in Shimizu '752 Figure 2a, a portion of the metal between the electrically-connected leads is left to remain, forming a coupling portion (shown in green below). (A112, A114, Fig. 2a; A451, ¶ 266.)

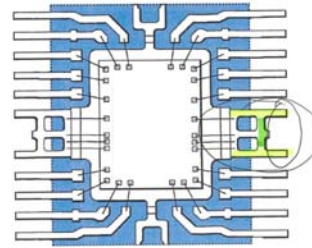
² The summary of argument and undisputed facts are set forth in each individual motion. Each undisputed fact is either individually numbered and identified as “UDF #___” in the argument, or is discussed in context of the argument itself.

³ A122 is a true and correct copy of the Shimizu '752 reference as retrieved from the Japanese Patent Office (“JPO”) website. (A666, ¶ 3; *see also* A667-668, ¶¶ 4-7 (stating that all Japanese patent publications cited herein were downloaded from the JPO website)); *see* Fed. R. Evid. 901, 902. Shimizu '752 and the other JPO publications cited herein are published prior art under pre-AIA § 102. (*See, e.g.*, A447, ¶ 243); *Tokyo Electron Limited v. Daniel L. Flamm*, 2017 Pat. App. LEXIS 13067, at *24-27 (PTAB Oct. 4, 2017) (holding that the WIPO code (43) date on Japanese patent office publications “provides sufficient evidence to conclude that [they] constitute printed publications under [pre-AIA] § 102.”); (A188 (WIPO Handbook on Industrial Property Information and Documentation, Standard ST.9.) ON itself asserts that Japanese Unexamined Patent Application Publications are published on the date listed. (A198 (excerpt from ON IPR Petition relying on publication date); A201 (excerpt from ON’s reference showing “(43) Publication Date”).)

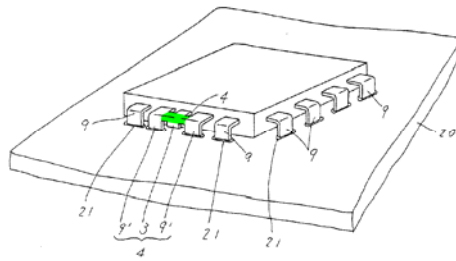
6. ON's expert does not dispute the physical structure disclosed in Shimizu '752. (A509, ¶¶ 51-53.) 7. In fact, ON's expert admitted that the hypothetical physical structure shown below (A106), mirroring Shimizu '752 (A120, Figs. 1, 2A), disclosed various claim elements, including common leads (highlighted in yellow by ON's expert) and an allegedly innovative coupling portion (highlighted in green). (A40, 121:9-14; A40-41, 121:19-122:3; A106.)



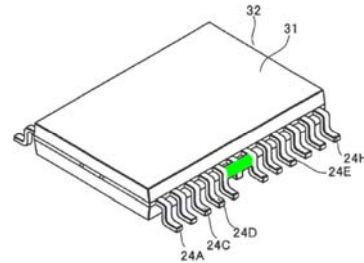
Shimizu '752 (A120, Fig. 1)



A106



Shimizu '752 (A120, Fig. 2a)



A106

8. The Court's claim construction requires that common leads have a "common electrical potential." (D.I. 111, at 2.) 9. ON's expert agreed that when structures are "connected to the island," they will have the "same potential" (A24, 56:19-57:23), that if a lead frame structure "at all points is connected to the island" it "would have a common electrical potential" (A40, 120:9-13), and that when leads "connect to the same thing," that is "why they are a common lead" (A24-25, 57:25-58:4.) 10. PI's expert agrees. (A566, ¶ 116.) 11. ON's expert also does not dispute that "[h]eat generated inside the package 'can be conveyed through the tab 5 to the . . . the exposed portions in the heat dissipating fins 4'," *i.e.*, the common leads in Shimizu '752 are coupled to the island. (A509, ¶ 52 (citation omitted).)

Argument

The Court construed “common leads” as part of the phrase “common leads projecting out from the resin-sealing body,” and in doing so relied on the parties’ agreement that “‘common’ means having ‘common electrical potential.’” (D.I. 110 at 12.) The ’211 patent states that “common potential (i.e., a ground potential)” results from each common lead “hav[ing] one end[] coupled to the island.” (A100, 3:33-36; UDF #9.) The common leads in Shimizu ’752 have a common electrical potential. (UDF #9-11.)

ON’s expert ignores the claim construction and asserts that Shimizu ’752 does not anticipate because its common leads have no electrical function. But nothing in the claim construction, the ’211 patent, or the prosecution history requires that “common leads” have an “electrical function.” (UDF #8.) ON’s expert admits there is nothing about the nature of a “lead” that requires an electrical function and PI’s expert agrees. (A253, ¶ 47 (lead can have a “thermal-only purpose[,]” rather than an “electrical” purpose.); A255-56, ¶ 56 (discrete leads “may” be electrically connected).) The ’211 patent discloses leads lacking any electrical function. (*See* A549, ¶ 20 (Fig. 5B discloses an unused lead); A25-26, 61:5-7, 61:25-62:10 (identifying Fig. 5B’s disconnected lead as a discrete lead within the scope of the claims).)⁴

There is no material dispute that Shimizu ’752 discloses every element of claims 1 and 9. (UDF #3-7, 10.) ON’s expert admitted that a structure corresponding to that of Shimizu ’752 discloses the claimed “common leads” and “coupling portion” (UDF #7), that *any* common leads coupled to an island have a common electrical potential (UDF #9), and that the leads of Shimizu

⁴ ON’s expert also asserted in his report that the Shimizu ’752 leads were “not electrodes.” A509, ¶ 53. ON’s expert, however, testified that “electrode” had no relevance to the ’211 patent. (A57, 187:2-14 (“I don’t see the word ‘electrode’ in Claim 1[,]” and that “[s]ince ‘electrode’ is not in Claim 1, why would I define electrode and how would I use that with respect to Claim 1 since it’s not in there. It seems to be a circular argument going nowhere.”)).

'752 are connected to the island. (UDF #6, 11.) Nothing further is required. (UDF #8.)

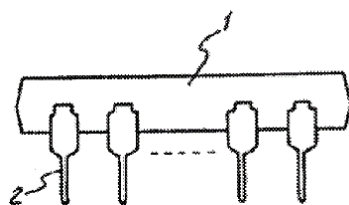
II. THE '211 PATENT'S HEAT DISSIPATION TECHNOLOGY WAS OBVIOUS.

Semiconductor package designers have long recognized the importance of heat dissipation techniques. By the mid-1980s, they had developed techniques to improve heat dissipation that added material between adjacent leads having a common electrical potential. A person of skill in the art working to improve the heat dissipation characteristics of the conventional semiconductor device disclosed in the '211 patent would have employed this well-known and predictable prior art.

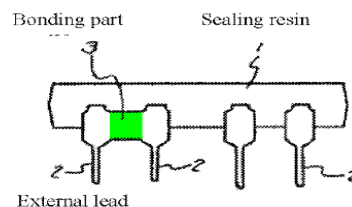
Statement of Undisputed Material Facts

1. Thermal management and heat dissipation is a well-known challenge in the semiconductor industry. (A170; A42, 127:16-22 (agreeing thermal management was a well-known problem to persons of ordinary skill); A500, ¶ 11.) 2. Years before the '211 patent critical date, packaging engineers “search[ed] for all possible improvements” to semiconductor heat management to improve package reliability and longevity. (A158.). These techniques included the addition of metal between leads with a common electrical potential.

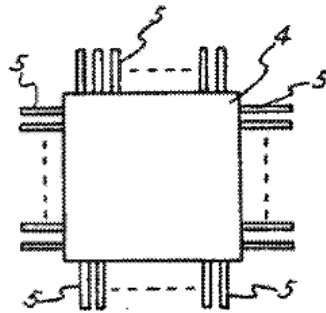
3. In 1987, for example, Japanese Unexamined Patent Application 62-45054 to Hoshino (“Hoshino”) reported improving the heat dissipation problem by connecting “a plurality of adjacent external leads” in a resin-sealed package with a “bonding” or “connecting” part. (A123-124; A434, ¶ 98.) Hoshino illustrates this simple improvement with before-and-after figures; with the “bonding” or “connecting” parts shown in green:



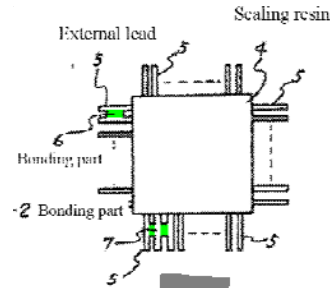
A124, Fig. 3(a)



A124, Fig. 1

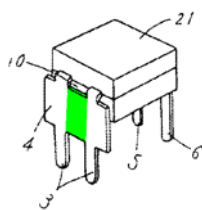


A124, Fig. 3(b)

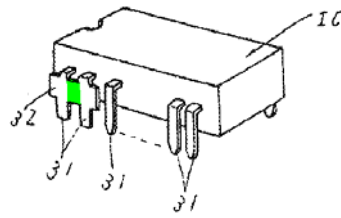


A124, Fig. 2

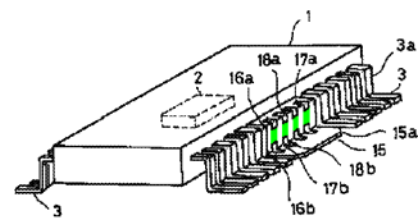
4. In 1986, Shimizu '752 likewise reported improvements in heat dissipation by joining adjacent leads external to the device, thus allowing “direct transfer[]” of heat from the semiconductor to the surrounding air. (A112-113.) 5. Also in 1986, Japanese Unexamined Patent Application Publications to Otaka disclosed similar improvements in heat dissipation implemented in a variety of configurations. (A627-629, ¶¶ 7, 9, A630, Figs. 3 and 5; A130; A136, ¶¶ 37, 40; *see also* A139, A144 (showing figures).) 6. By the early 1990s, skilled artisans focused on improving manufacturability by positioning the coupling portion at specific locations on the lead frame. (A432-33, ¶¶ 92, 94, 96; *see generally* A435-439, ¶¶ 99-100, 104; A106-107; A149.) Several of these improvements are shown below, with the coupling portion in green:



A630, Fig. 3 (1986)



A630, Fig. 5 (1986)

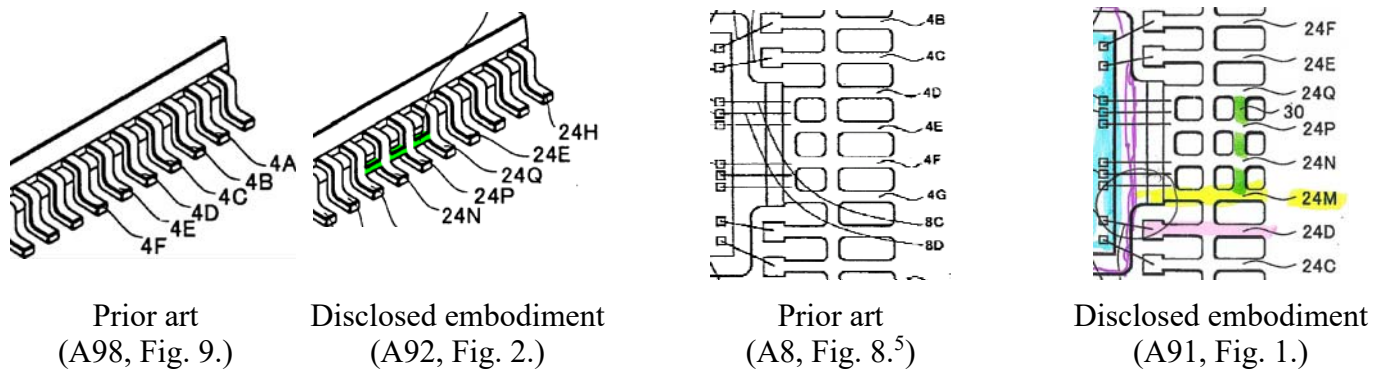


A149, Fig. 3 (1992)

7. More than a decade later, the '211 patent addressed the same problem, using the same technique. 8. The '211 patent's only alleged innovation was a “coupling portion” to join a plurality of leads with a common electrical potential to improve heat dissipation. (A538, ¶ 131 (“the invention of the '211 patent is adding a coupling portion.”).)

9. No reference cited on the face of the '211 patent discusses these long-known heat

dissipation techniques, and the '211 patent does not otherwise identify or acknowledge the prior art use of joining adjacent leads with additional metal to improve heat dissipation. (A90.) **10.** The '211 patent does, however, describe as prior art a “conventional semiconductor device” that contains all of the features of the asserted claims except the allegedly new “coupling portion.” (A99, 1:14-48; *see also* A97-99, 2:53-59, Figs. 8-10 (describing device); A467-68, ¶¶ 549, 551.) **11.** This is illustrated in before-and-after figures, with the allegedly new coupling portion in green:



12. Claim 10 requires the coupling portion be formed on the vertical portion of the gull-wing shape shown in figure 2. (A102; *see* A91-93, Figs. 1-4; A600, ¶ 275.) Hoshino teaches use of its “connecting” or “bonding” part on the vertical part of its leads, and at their mid-point. (A124, Figs. 1-2; A434, ¶ 98; A583-84, ¶ 227.)

13. ON’s expert testified that every POSITA knew that connecting leads intended to be electrically independent was “dangerous” and rendered them “useless.” (A505, ¶ 22.) **14.** PI’s expert agreed that a POSITA knew to couple leads with a common electrical potential to improve heat dissipation, and not the discrete leads intended to be electrically independent. (A579, ¶ 213; A594, ¶ 259; A596, ¶ 262; A602-603, ¶¶ 281-82.)

15. A person of skill in the art had at least a year of experience working with electronic

⁵ ON asserts that Figure 8 of the '211 patent is an error. This motion assumes, consistent with ON’s assertions, that the correct Figure 8 does not include a “coupling portion.” The illustration above is from the application.

packaging and a related degree. (See A241-242, ¶ 15; A499, ¶ 7; A309-310, ¶¶ 23-24.)

Argument

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (reversing Federal Circuit holding that had vacated summary judgment of obviousness); *see also id.* at 415-16 (“a ‘patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what already is known into the field of its monopoly’”) (citation omitted).

“Obviousness is a question of law based on underlying findings of fact[.]” including “(1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the art, and (4) any relevant secondary considerations, such as commercial success, long felt but unsolved needs, and the failure of others.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1237 (Fed. Cir. 2010); *see also In re Huang*, 100 F.3d 135, 138 (Fed. Cir. 1996) (citation omitted) (affirming obviousness finding where “[t]he admitted prior art, . . . teaches almost all aspects of [the] claimed invention” and a reference taught the single missing element).

The scope and content of the prior art is undisputed. The ’211 patent admits that all claim elements, except coupling adjacent leads having a common electrical potential, were in the prior art. (UDF #8, 10-11.) “A statement in a patent that something is in the prior art is binding on the applicant and patentee for determinations of anticipation and obviousness.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1988). Since the mid-1980s, Hoshino and other inventors taught skilled artisans to improve heat dissipation by joining adjacent leads with a coupling portion, and persons of ordinary skill recognized the importance of this heat management technique in semiconductor devices many years before the ’211 patent’s critical date. (UDF #3-6.) A POSITA

understood that coupling discrete leads was ineffective, “dangerous,” and rendered them “useless.” (UDF #13-14.) The ’211 patent does no more than unite the old, existing heat management techniques taught in Hoshino with the conventional, prior art semiconductor package described in the ’211 patent.

The ’211 patent is, in this way, similar to the *KSR* patent and the patents in many Federal Circuit decisions finding patent claims obvious as a matter of law. For example, in *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1245 (Fed. Cir. 2010), the Federal Circuit addressed similar facts, and found as a matter of law no reasonable jury could find the patent nonobvious:

[A]t the time of the invention, there were two known ways to protect a lock’s locking head from the ingress of contaminants—an external or an internal seal—and both design options were common and widely used in locks in the prior art. It is a matter of common sense that a flat external seal used in the prior art padlocks could be combined with a barbell-shaped hitch pin lock. . . . [A]n external flange seal would work the same way [in both], and . . . the purpose of the seals was the same in the prior art padlocks as in the patented device. We conclude that the invention of the ’649 patent represents no more than “the predictable use of prior art elements according to their established functions”

Id. (quoting *KSR*, 550 U.S. at 417); *see also Ecolab, Inc. v. FMC Corp.*, 569 F.3d 1335, 1350 (Fed. Cir. 2009) (reversing jury verdict of nonobviousness where problem was known in the art, solution was known, and the results of applying the solution were predictable); *Intercontinental Great Brands LLC v. Kellogg N. Am. Co.*, 869 F.3d 1336, 1341 (Fed. Cir. 2017) (affirming summary judgment of obviousness where resealable package solved known prior art problem); *Ball Aerosol & Specialty Container, Inc. v. Ltd. Brands, Inc.*, 555 F.3d 984, 992-93 (Fed. Cir. 2009) (reversing denial of summary judgment of obviousness where the known problem had known solutions).

ON’s arguments to the contrary are wrong. First, ON’s expert asserts—with no explanation—that “Hoshino does not disclose a coupling portion.” (A525, ¶ 113.) But the purpose and mechanical structure of Hoshino’s “connecting” and “bonding” parts match the purpose and

mechanical structure of the '211 patent's coupling portion in every relevant way. (*See* UDF #3, 12.) Hoshino uses before-and-after illustrations that teach a POSITA exactly how to couple leads to improve heat dissipation, similar to the language and illustrations of the '211 patent. (UDF #3) ON's expert, moreover, fails to explain any alleged differences between the Hoshino "connecting" or "bonding" part and the '211 patent's "coupling portion." (A525, ¶ 113; A538, ¶ 132.) His short sentences contain no citation or rationale, and such conclusory statements must be disregarded. *Podobnik v. United States Postal Serv.*, 409 F.3d 584, 594 (3d Cir. 2005) ("a party must present more than just 'bare assertions, conclusory allegations or suspicions' to show the existence of a genuine issue") (citation omitted); *Move, Inc. v. Real Estate All., Ltd.*, 721 F. App'x 950, 957 (Fed. Cir. 2018) (affirming summary judgment of invalidity where an "expert's conclusory declaration . . . provides no citations to support [his] assertion and contains no additional rationale").

Next, ON's expert claims Hoshino does not describe "exactly which leads are to be coupled," *i.e.*, the common leads or the discrete leads. (A538, ¶ 132.) But this claim misses the point legally and factually. Legally, *KSR* makes clear that "[o]ne of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem [here, heat dissipation] for which there was an obvious solution [joining adjacent leads] encompassed by the patent's claims," 550 U.S. at 419-20, and that the "proper question to . . . ask[] [i]s whether a [package designer] of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to [using the Hoshino heat dissipation technique with a more modern semiconductor package]," *id.* at 424. Thus, Hoshino's teachings about improving heat dissipation by adding additional metal to adjacent leads should be the focus of the analysis. Factually, ON's expert admits that every POSITA knew not to couple discrete leads carrying different electrical signals (UDF #13), and "the analysis need not seek out precise teachings directed

to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418.

With respect to dependant claims 4 and 10, which claim a semiconductor package using “gull-wing” leads, ON’s expert asserts that a POSITA would not look to non-gull-wing packages for heat management techniques. (A519, ¶ 98.) Again, however, the obviousness inquiry focuses on whether the alleged improvement is any more “than the predictable use of prior art elements according to their established functions.” 550 U.S. at 417. *KSR* nicely illustrates this principle in its discussion of the prior art. *Id.* at 424-25. The focus of the *KSR* analysis was using known techniques, like Hoshino, to solve similar problems, even though the prior art in *KSR* addressed a mechanical, not electrical, acceleration pedal. *Id.* Here, a skilled artisan looking to improve the thermal characteristics of the admitted prior art semiconductor device—which is already a gull-wing lead frame (A98, Fig. 9)—would employ the familiar and known solution of coupling two adjacent leads as disclosed in Hoshino. (A469-470, ¶¶ 560-561.) Hoshino explains that coupling leads in a semiconductor like that of the admitted prior art improves their heat dissipation.⁶ (*See* UDF #3, 10.) No one has asserted that joining leads with a coupling portion operates differently in different kinds of semiconductor packages. (*See* UDF #6 (describing references that couple gull-wing leads).) Coupling leads together was one of a finite number of identified, predictable ways to improve heat dissipation in such devices. (A604, ¶ 284.) Thus armed with the “technique [of coupling leads to address the problem of heat dissipation] to improve one device,” a POSITA would “recognize that it would improve similar devices in the same way[.]” *KSR*, 550 U.S. at 417.

Finally, there is no genuine dispute that Hoshino teaches coupling leads at their vertical portion, and at their mid-point outside of the resin (meeting dependent claims 4, 9, and 10). (UDF

⁶ The parties dispute whether Hoshino discloses gull-wing leads. This motion assumes, consistent with ON’s assertions, that Hoshino does not disclose gull-wing leads.

#3, 10.) The coupling portion of Hoshino’s second embodiment is located at the mid-point of the leads, which corresponds to the vertical portion of a gull-wing lead shape (as established by the unrebutted testimony of PI’s expert). (UDF #3, 12.) In short, ON has made no showing that a POSITA would be unable to use the Hoshino technique with the admitted prior art, would not have a reasonable expectation of success in doing so, or that use of the Hoshino technique and the admitted prior art would not meet all of the claim elements.

Last, there is no material dispute of fact regarding secondary considerations. ON did not list any secondary considerations in response to an interrogatory seeking the specific facts and reasons the ’211 patent is not invalid, and ON offered no expert testimony that the claims are not obvious due to secondary considerations. (A213; A230-234.)⁷ Nor does ON contend that any ON product practiced the ’211 patent in any of the 13 years since the patent issued, including products from its predecessors Sanyo Semiconductor (the original patent assignee), Fairchild (a semiconductor manufacturer acquired by ON in 2016), or System General (a semiconductor manufacturer acquired by Fairchild in 2007). (A204 (listing only products that practice ON’s other patents); A212.)

Where, as here, “the invention[] represented no more than ‘the predictable use of prior art elements according to their established functions,’ . . . secondary considerations are inadequate to establish nonobviousness as a matter of law.” *Wyers*, 616 F.3d at 1246 (reversing denial of JMOL of obviousness) (citation omitted); *see also E.I. du Pont de Nemours & Co. v. MacDermid Printing Sols., L.L.C.*, 657 F. App’x 1004, 1015 (Fed. Cir. 2016) (affirming grant of summary judgment of

⁷ In an earlier response, ON asserted that the accused products have “experienced commercial success” (A207), but it offered no specific facts and, in its later response, dropped that contention. Moreover, “if the commercial success is due to an unclaimed feature of the device, the commercial success is irrelevant.” *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006). ON has not asserted the ’211 patent is the cause of any commercial success and, in fact, attributes commercial success to ON’s *other* asserted patents. (*See, e.g.*, A609-611, ¶¶ 66-69 (contending that “synchronous rectification” is a “core advantage” for the accused products, and that various other features unrelated to the ’211 patent are “useful,” “valuable,” “important,” and/or “necessary”)).

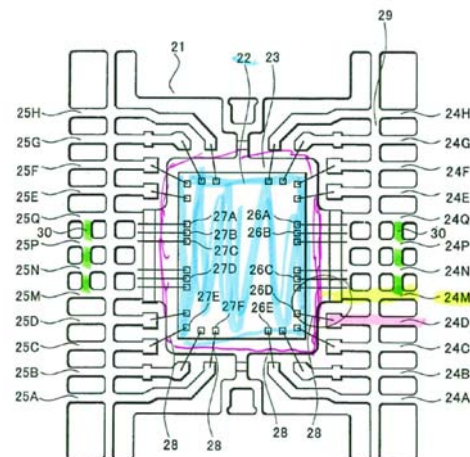
obviousness where plaintiff presented evidence of “unexpected results, copying, commercial success, long-felt but unmet need, and industry praise,” but “the record contains strong evidence that a skilled artisan would have had a reason to combine two known technologies and would have had a reasonable expectation of success in doing so”); *Tyco Healthcare Grp. LP v. Mut. Pharm. Co.*, 642 F.3d 1370, 1377 (Fed. Cir. 2011) (affirming district court’s finding of obviousness despite evidence of commercial success). Thus, no reasonable juror could conclude that it was not obvious to couple the leads of the conventional semiconductor device to improve heat dissipation, when the Hoshino reference teaches doing exactly that, for exactly that reason.

III. THE ACCUSED eSOP PRODUCTS DO NOT MEET THE “DISCRETE LEADS” LIMITATION OF THE ASSERTED CLAIMS.

ON’s expert opined that the limitation “discrete leads each having an end extending near the island” (’211 patent, claim 1) requires discrete leads only to be “near enough” to “perform [a] usable function” (A26-27, 65:19-66:8.) This contortion of the claim language has no support, and the accused eSOP products do not infringe.

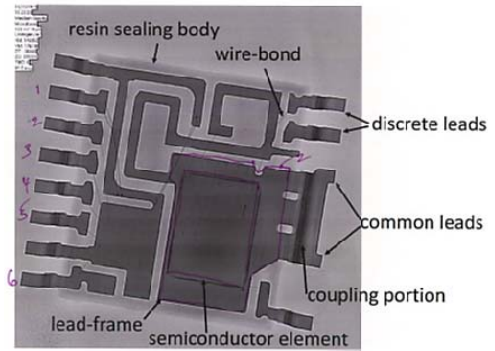
Statement of Undisputed Material Facts

1. The asserted claims require “an island on which a semiconductor element is mounted” and “a plurality of discrete leads each having an end *extending near* the island.” (A102 (emphasis added).) 2. Figure 1—an embodiment of claim 1—depicts the island (23 (purple)) and “discrete leads” (24D (pink), 24A-C, E-H, 25A-D, E-H) with ends “extending near the island.” (A91.)⁸



⁸ ON’s expert highlighted these elements during his deposition. (A22, 48:1-23; A23, 50:2-4.)

3. ON's expert opined that PI's "eSOP" products infringe. (A263, ¶ 74.) 4. An X-ray image of that product is to the right, with ON's expert's labels showing alleged "discrete leads" (those labeled "discrete leads," those labeled 1-6, and the lead at the bottom right) and



what he alleges is the claimed "island" (outlined in purple and labeled 1 and 2). (A264-267, ¶¶ 77, 80-81; A109; A55, 179:5-19, 180:13-18.) 5. ON's expert's first report did not explain why these leads are "extending near" the island. (A266-267, ¶¶ 80-81.) 6. In his reply report, ON's expert claimed that the eSOP "discrete leads" "are *close enough* to be wire bonded and carry electrical signals used by the semiconductor element." (A377-378, ¶¶ 13, 15 (emphasis added).) 7. At deposition, he confirmed that any discrete lead that is "near enough" to "perform [a] usable function" qualifies as "extending near" the island or semiconductor. (A26-27, 65:19-66:8.)

8. The '211 patent does not ascribe any special definition to the word "extend"—it has its ordinary meaning as an intransitive verb, which is "to stretch out in distance, space, or time : reach."⁹ (A236 (Merriam-Webster Dictionary); *see, e.g.*, A100, 3:17-20 ("The common leads 24M and the like have one ends [sic] coupled to the island 23, and the other ends [sic] which ***extend to the outside*** of the island 23 so as to act as outer portions." (emphasis added)); A101, 6:29-34 ("Note that, in the second embodiment, the description has been given with regard to the case in which the ***outer leads extend from one side of the board***. However, . . . the ***outer leads may extend from opposite sides of the board***." (emphasis added)).) 9. ON's expert himself uses the ordinary meaning of "extend" to show directionality. (A270, ¶ 90 ("Figures 11 and 12 show that the discrete and common leads of the INN2215K device ***extend out from the resin sealing body and are not tucked under the body***,

⁹ For example, in Figure 1 above, the ends of the discrete leads (24 and 25 A-D, E-H) "stretch out in distance" and "space" near the island—*i.e.*, reach toward the island and end near it. (A91.)

as in a J-lead.” (emphasis added)).)

Argument

No special claim construction is required to define what it means to “extend near” another structure—“extend” is well-understood to convey the direction in which the subject of the sentence is traveling (or extending), as the ’211 patent and ON’s expert recognize. (UDF #8-9.)

As PI’s expert explained, ON’s expert “failed to identify . . . a plurality of discrete leads each having an end extending near the island[.]” (A316, ¶ 42 (opining that the accused eSOP products do not meet this limitation).) Under ON’s analysis, every lead “extend[s] near” the island if that lead is “usable” (*i.e.*, as long as it ends close enough to be attached to the semiconductor with a wire). (A26-27, 65:19-66:8.) ON’s expert did not analyze whether any of the alleged leads in the eSOP products is in fact “extending near” the island as claimed in the ’211 patent. As shown in Figure 1, the ends of the discrete leads (24 and 25 A-D, E-H) “stretch out in distance” and “space” near the island—*i.e.*, reach toward the island and end near it. (UDF #2.) In contrast, the X-ray image of the eSOP lead frame shows a single lead “extending near” the island (the one at bottom right), which cannot meet the limitation because a single lead—by definition—is not a “plurality” of leads. The ends of the other discrete leads simply extend inward—none reach toward the island and end near it.

To be certain, ON’s expert parrots the claim language in his opinion.¹⁰ But “an expert’s unsupported conclusion on the ultimate issue of infringement is insufficient to raise a genuine issue of material fact, and that a party may not avoid that rule simply by framing the expert’s conclusion as an assertion that a particular critical claim limitation is found in the accused device.” *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1277-78 (Fed. Cir. 2004) (affirming summary

¹⁰ For example, in response to a question about the leads labeled 1-6 in the X-ray image above (which ON has never contended meet the limitation), ON’s expert testified that those leads “extend inward and point toward the island.” (A55, 180:13-23.) But again, that conclusory statement is unsupported by any analysis other than being “usable.”

judgment of where plaintiff’s experts provided “conclusory assertions, reached using words in ways that contradict their plain meaning, that a critical claim limitation is found in the accused device”).

The patent claims a plurality of discrete leads “having an end *extending* near” an island—not “positioned near” or “near enough to be linked with a wire bond”—and ON has provided no evidence to rebut the opinion of PI’s expert that the eSOP products do not meet this limitation. Thus, the Court should enter judgment for PI. *O2 Micro Int’l, Ltd. v. Monolithic Power Sys.*, 467 F.3d 1355, 1369-70 (Fed. Cir. 2006) (affirming summary judgment for lack of evidence); *see also* *Homeland Housewares, LLC v. Sorensen Research & Dev. Tr.*, 581 F. App’x 869, 874-75 (Fed. Cir. 2014) (affirming summary judgment of noninfringement for lack of evidence; “as the moving party that would not have the burden of proof at trial, [defendant] needed only to point out to the district court ‘the absence of evidence to support the nonmoving party’s case’”) (citation omitted).

IV. ON FAILED TO PROVIDE ANALYSIS OR EVIDENCE ON DoE.

ON failed to provide any basis for its conclusory allegation of infringement under the doctrine of equivalents, let alone the “particularized testimony” required by the Federal Circuit.

Statement of Undisputed Material Facts

1. ON’s complaint alleges that “[u]pon information and belief, Power Integrations has been directly infringing and is now directly infringing . . . , either literally or under the doctrine of equivalents,” (D.I. 24, ¶¶133.) 2. ON’s final contentions on the ’211 patent included only the following about DoE: “[t]o the extent any asserted claim limitation is not literally present for [the accused products], these devices or assemblies contain equivalent structure performing the same function, in the same way, with the same result.” (A614-622.) 3. ON’s expert did not address the DoE in his report beyond a recitation of the standard. (A242-243, ¶ 20; A21, 43:9-25.)

Argument

A plaintiff asserting infringement under the doctrine of equivalents (“DoE”):

must . . . provide particularized testimony and linking argument as to the ‘insubstantiality of the differences’ between the claimed invention and the accused device or process, or with respect to the function, way, result test when such evidence is presented to support a finding of infringement under the doctrine of equivalents. Such evidence must be presented on a limitation-by-limitation basis. Generalized testimony as to the overall similarity between the claims and the accused infringer’s product or process will not suffice.

Tex. Instruments, Inc. v. Cypress Semiconductor Corp., 90 F.3d 1558, 1567 (Fed. Cir. 1996). This “particularized testimony and linking argument” must be separate from the plaintiff’s evidence on literal infringement. *Id.*

Where a plaintiff fails to provide “particularized testimony and linking argument,” summary judgment is appropriate. *See, e.g., Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1338-39 (Fed. Cir. 2011) (affirming summary judgment of non-infringement where plaintiff relied on “generalized testimony as to the overall similarity between the claims and the accused infringer’s product”); *Cooper Notification, Inc. v. Twitter, Inc.*, 867 F. Supp. 2d 485, 496-97 (D. Del. 2012) (granting summary judgment of non-infringement where expert offered “conclusory boilerplate” that “merely recite[d] the legal elements” of the equivalents test and failed to provide “meaningful explanation of why or how Defendants’ accused systems are equivalent to the asserted claims”).

Neither ON nor its expert have provided any of the required “particularized testimony” or “linking argument” to support a DoE claim on the ’211 patent. Instead, ON and its expert provide conclusory statements unsupported by any factual material, and boilerplate recitations of the legal standard. (UDF #1-3.) These scant and conclusory statements are exactly the type of generalized testimony that warranted summary judgment in *American Calcar*, 651 F.3d at 1338-39.

MOTION FOR SUMMARY JUDGMENT ON PRIVACY AND ISSUE PRECLUSION

Because Fairchild is now ON, ON should be bound by issue preclusion just as Fairchild would be. Because certain of ON’s defenses in this case are the same as defenses that Fairchild previously litigated and lost, the Court should grant summary judgment of issue preclusion,

infringement, and no invalidity with respect to PI's '851 patent.

Argument

A. ON Is Precluded Just As Fairchild Would Be Regarding the '851 Patent

Shortly before this case was filed, ON acquired Fairchild Semiconductor, a company twice found to infringe PI's '851 patent. Fairchild also sought to invalidate the '851 patent in the previous litigations and lost. Judgments of infringement and no invalidity have been entered against Fairchild for the '851 patent.

As a result of these past litigations, a critical issue is whether ON is bound by the judgments against its subsidiary Fairchild. PI hereby moves for summary judgment that ON's noninfringement and invalidity defenses for the '851 patent are precluded. PI supports this motion with the following evidence: (1) U.S. Patent 6,107,851 (A1000-1023); (2) the agreement and plan of merger entered between ON and Fairchild on November 18, 2015 (A1024-1160); (3) the confidentiality agreement entered between ON and Fairchild on September 14, 2015 (A1161-1170); (4) an ON press release announcing the closure of the merger on September 19, 2016 (A1171-1173); (5) an ON document stating that, after the merger, "Fairchild surviv[ed] as a wholly-owned subsidiary of ON Semiconductor Corporation." (A1176); (6) evidence that ON filed twelve *inter partes* reviews in the PTO on behalf of Fairchild in 2016—after the parties agreed to merge but before the merger closed (A1183-1187); (7) testimony from ON CEO Keith Jackson regarding the merger (A1190-1191); (8) ON's privilege log in this case (A1192-1264);¹¹ (9) final judgment entered by this Court against

¹¹ Regarding this privilege log, PI expects to obtain yet more evidence before this motion is decided. After this Court ordered production of evidence relating to the ON/Fairchild merger (D.I. 202), ON withheld nearly 1,000 pre-merger communications between ON and Fairchild (and others) as allegedly privileged. Because ON has not laid the necessary foundation for its privilege claims, and given that ON was unsuccessful in resolving this issue during meet and confer, PI intends to bring another motion to compel. PI submits that the present motion is fully supported by the existing record, particularly with respect to privity based on successive property ownership. However, the additional evidence is likely relevant to other bases for finding privity.

Fairchild in *Fairchild I* that the '851 patent was willfully infringed and not invalid (Case 1:04-cv-01371-LPS, D.I. 800) (A1265-1267); (10) the Federal Circuit decision affirming the judgment against Fairchild in *Fairchild I* that the '851 patent was directly infringed and not invalid (711 F.3d 1348) (A1268-1302); (11) this Court's opinion in *Fairchild II* granting partial summary judgment in PI's favor on issue preclusion (Case Civ. No. 08-309-LPS, D.I. 348) (A1303-1345); (12) this Court's opinion in *Fairchild II* denying Fairchild's motions for judgment as a matter of law (Case Civ. No. 08-309-LPS, D.I. 731) (A1346-1375); (13) final judgment entered by this Court against Fairchild in *Fairchild II* that the '851 patent was infringed and not invalid (Case Civ. No. 08-309-LPS, D.I. 819) (A1376-1379); (14) the Federal Circuit decision affirming judgment in *Fairchild II* that the '851 patent was directly infringed and not invalid (843 F.3d 1315) (A1380-1406).

The ON/Fairchild merger agreement (A1024-1160) spells out not merely an offer but a detailed 136-page *agreement* to merge. While there were conditions precedent to closure, conditions exist in nearly every contract. Moreover, upon satisfaction of those conditions, the agreement definitively states that "Acquisition Sub *shall be merged* with and into the Company." (A1037, emphasis added.) In other words, the merger agreement created a contractual relationship between ON and Fairchild on the day it was signed on November 18, 2015. Therefore, at least as of that date, the parties were acting in collaboration on and in furtherance of the merger. [REDACTED]

[REDACTED]

[REDACTED]

In addition, even before the merger agreement, ON and Fairchild entered into another contract, a confidentiality agreement dated September 14, 2015 (A1162). This agreement stated that ON and Fairchild "share a common legal and commercial interest" and "are or may become joint defendants." (A1168, ¶ 16.)

In 2016, after ON and Fairchild entered their confidentiality and merger agreements, but before the merger closed, ON filed twelve *inter partes* reviews in the PTO, regarding PI patents that *Fairchild* (not ON) had been found to infringe or had been sued for infringing. (A1186-1187.)

The merger then closed on September 19, 2016, making ON and Fairchild one company. (A1172; A1175.) Thereafter, the Federal Circuit affirmed the judgment finding the '851 patent infringed and not invalid. (A1380-1406.) More recently, a jury found that Fairchild induced infringement, that Fairchild's infringement was willful, and that Fairchild was liable for damages. (Case Civ. No. 08-309-LPS, D.I. 1014.) This Court again denied Fairchild's post-trial motions. (Case Civ. No. 08-309-LPS, D.I. 1069.)

These facts are sufficient to find that ON is precluded from challenging the validity and infringement of the '851 patent in this case. Issue preclusion, also called collateral estoppel, bars “successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment.” *Taylor v. Sturgell*, 553 U.S. 880, 892 (2008). By “precluding parties from contesting matters that they have had a full and fair opportunity to litigate,” issue preclusion protects against “the expense and vexation attending multiple lawsuits, conserve[s] judicial resources, and foster[s] reliance on judicial action by minimizing the possibility of inconsistent decisions.” *Id.* (internal quotation omitted). Issue preclusion applies where “(1) the issue sought to be precluded is the same as that involved in the prior action; (2) that issue was actually litigated; (3) it was determined by a final and valid judgment; and (4) the determination was essential to the prior judgment.” *Power Integrations v. Fairchild*, 763 F. Supp. 2d at 678 (quoting *Burlington N. R.R. v. Hyundai Merch. Marine Co.*, 63 F.3d 1227, 1231–32 (3d Cir. 1995)).¹²

¹² Issue preclusion in a patent case is governed by regional circuit law, unless the determination involves substantive patent law. *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2013).

All of these elements are met here. As detailed in the following sections, the infringement and validity issues for the '851 patent in this case are the same as were previously litigated, and the previous proceedings ended in final judgments on the merits. In addition, at least as of September 19, 2016, ON admittedly was in privity with Fairchild. That means ON is barred in the same way Fairchild would be. As the Federal Circuit has held, “[c]ourts have repeatedly found privity where, after a suit begins, a nonparty acquires assets of a defendant-infringer.” *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1583 (Fed. Cir. 1986) (citing *Brunswick Corp. v. Chrysler Corp.*, 408 F.2d 335, 338 (7th Cir. 1969)) (acquiring company was precluded from challenging validity after it bought all the assets of another company that was estopped). Indeed, the Federal Circuit recently repeated and relied upon its holding in *Kloster* in related litigation between the parties here. In *Power Integrations, Inc. v. Semiconductor Components Industries, LLC*, 926 F.3d 1306 (Fed. Cir. 2019), the Federal Circuit held that ON’s IPR petition was barred by its privity with Fairchild. Although that decision involved an issue of statutory construction not present in this case, the Federal Circuit drew on common law issue preclusion law for guidance. In so doing, it repeated its statement that privity and issue preclusion may be based on acquisition of an infringer’s business, citing *Kloster*. *Id.* at 1315-16. It also cited and quoted the Seventh Circuit decision on which *Brunswick* was based, *J.R. Clark Co. v. Jones & Laughlin Steel Corp.*, 288 F.2d 279, 280 (7th Cir. 1961). *Id.* at 1316. *Clark* explains the rationale for preclusion:

[I]f a third party may thus come into the acquisition of rights involved in pending litigation without being bound by the final judgment, and require a suit de novo in order to bind him, he might, pending that suit, alienate that right to another with the same result, and a final decree bearing fruit could never be reached.

Power Integrations, 926 F.3d at 1316 (quoting *Clark*, 288 F.2d at 280).

This Court also reached the same conclusion in *AstraZeneca UK Ltd. v. Watson Laboratories, Inc.*, 905 F. Supp. 2d 596, 603 (D. Del. 2012), where it held: “Given that Cobalt is

precluded from relitigating the issue of validity, Watson is also precluded as Watson is Cobalt's successor in interest." *See also Bingo Card Minder Corp. v. Power Bingo Corp.*, 1996 WL 711515 (N.D. Cal. 1996) (finding privity and issue preclusion on summary judgment based on asset transfer, following *Brunswick*).

ON will likely argue that it never had its day in court, but this misses the point of privity. ON *is* Fairchild, and the law does not permit the combined entity to burden the courts (and PI) with previously rejected defenses. If Fairchild had acquired ON and kept the name "Fairchild," there would be no question that it could not resurrect its defenses. The result is no different simply because Plaintiffs have chosen to use the name ON rather than Fairchild for the combined entity.¹³

Moreover, the case law is rife with examples demonstrating that a successor-in-interest may have its rights limited post-merger based on the property that it acquired, as demonstrated by the cases above. In *Kloster*, the successor company was held bound even though it did not come into existence until after the earlier trial. 793 F.2d at 1569. In *Brunswick*, which was cited with approval in *Kloster*, the acquiring company was precluded from challenging validity after it bought all the assets of another company that was estopped, even though the acquiring company was not itself involved in the earlier litigation. 408 F.2d at 338. *Brunswick* held that the defendant Chrysler was precluded from challenging validity because it had purchased "the entire business" of the company that had previously challenged validity and lost. *Id.* Similarly, in *Clark*, cited with approval by the

¹³ In addition, it is not really true that ON never had its day in court. Based on information presently available to PI, ON began acting in concert with Fairchild on PI patent matters by September 14, 2015 (the date of the confidentiality agreement) (A1162), and the merger closed on September 19, 2016 (A1172; A1175). Both the *Fairchild I* and *Fairchild II* cases are ongoing; the *Fairchild II* retrial occurred in late 2018, over two years after the merger closed; and ON even sent one of its Vice Presidents (Eric Hertz) to serve as Fairchild's corporate representative at that trial. Again, PI expects discovery to reveal more ways in which ON controlled Fairchild's litigation with PI, but that is not essential to this motion since the Court can and should find privity and preclusion based simply on ON's acquisition of Fairchild's entire business at issue in the previous litigations.

Federal Circuit in both *Kloster* and the recent *Power Integrations* decision, the defendant was precluded from challenging infringement—even as to its own similar products—because it had purchased the entire business of a company previously found to infringe. 288 F.2d at 280.

Therefore, this Court should enter partial summary judgment that ON is subject to issue preclusion just as Fairchild would be.

B. ON’s Noninfringement Defense for the ’851 Patent Is Precluded

ON’s noninfringement defense for the ’851 patent is the same defense that Fairchild raised and lost in *Fairchild II*—whether a single wire output from an oscillator can carry the “two signals” recited in the claims. [REDACTED]

[REDACTED] And the identical issue would be presented to the jury: can a single wire meet the claim’s requirements, or are two physical wires required to provide the two recited signals? ON’s argument, [REDACTED] is identical to Fairchild’s previously rejected argument. ON’s defense thus should be precluded and summary judgment of infringement granted (leaving only issues of indirect infringement).

The Court explained this issue in its opinion denying Fairchild’s motion for JMOL in *Fairchild II*. In that opinion, the Court began by noting that “[t]he infringement dispute at trial focused on a single element of the ’851 patent, an ‘oscillator further providing a maximum duty cycle signal comprising a first state and a second state.’” (A1373.) The Court then addressed and rejected Fairchild’s argument for the SG6842J product¹⁴ that “the ’851 patent shows both a ‘clock’ signal and a ‘maximum duty cycle’ signal” and that “the claims require these two signals to be separate.” (A1374.) The Court held:

The Court does not agree that this is an issue of claim construction. Neither party sought to construe the ‘maximum duty cycle signal’ limitation at any point in this

¹⁴ While a different product involved an alternate argument, this was the only infringement issue for the SG6842J product. (A1373.)

case. The jury was asked to resolve a factual dispute: whether the PULSE signal in the accused products is a ‘maximum duty cycle signal comprising a first state and a second state.’ The question now before the Court is whether Power presented evidence at trial that can reasonably support the Jury’s verdict. The Court finds that Power did so.

$$(Id.)$$

The same claim element and factual issue is the basis of ON's defense in this case.¹⁵ Like Fairchild, ON argues that the "maximum duty cycle" element requires *separate* "clock" and "maximum duty cycle" signals. (A1411-1425, ¶¶ 38-58 ("[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]").)

That is, ON's position is that two physical wires are required for the two signals, and a single wire cannot possibly carry both signals.

Fairchild based its defense for the SG6842J on the same factual issue and lost; ON is precluded from making it here. ON's expert Dr. Zane provided all the necessary admissions during his deposition: (1) [REDACTED]

[REDACTED] (A1430-1437, 17:9-18:2, 18:14-19:7, 28:19-25); (2) [REDACTED]

[REDACTED]

[REDACTED] (*id.* at 19:13-19, 56:2-14, 58:18-24, 59:1-7,

¹⁵ While PI asserts different claims in the present case than in *Fairchild II*, the limitation quoted above is identical in original claim 18, asserted in *Fairchild II*, and reexamination claims 20 and 16, asserted here. (See A1018-1023.) “Complete identity of claims is not required” to establish the identity-of-issues requirement for issue preclusion. *Soverain Software LLC v. Victoria’s Secret Direct Brand Mgmt., LLC*, 778 F.3d 1333, 1319-1320 (Fed. Cir. 2015). “Rather, it is the identity of the *issues* that were litigated that determines whether collateral estoppel should apply.” *Ohio Willow Wood Co. v. Alps South, LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2013) (citations omitted, emphasis in original). “If the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies.” *Id.* (finding issue preclusion where the asserted claims were “substantially similar” to the claims at issue in the prior litigation).

60:12-61:8, 62:3-17 [REDACTED]

[REDACTED] and (3) [REDACTED]

[REDACTED] (*id.* at 70:8-72:13 [REDACTED])

[REDACTED]); *see also id.* at 73:17-74:2). Dr. Zane also admitted that [REDACTED]

[REDACTED] (*Id.* at 76:7-77:8.)

ON will likely respond that the accused products in this case are different from those in *Fairchild II*. This argument is misdirection: [REDACTED]

[REDACTED] The fact that circuitry unrelated to the disputed element is different is irrelevant. Thus, the exact same factual issue was raised by Fairchild in connection with the SG6842J [REDACTED]

Preclusion applies to different products where there are no material differences between them. “Accused devices are ‘essentially the same’ where the differences between them are merely ‘colorable’ or ‘unrelated to the limitations in the claim of the patent.’” *Acumed LLC v. Stryker Corp.*, 525 F.3d 1319, 1324 (Fed. Cir. 2008) (quoting *Foster v. Hallco Mfg. Co.*, 947 F.2d 469, 480 (Fed. Cir. 1991)); *see also Aspex Eyewear, Inc., v. Zenni Optical LLC*, 713 F.3d 1377, 1381-82 (Fed. Cir. 2013) (holding that plaintiff’s infringement allegation was precluded by collateral estoppel where the accused products in the instant suit were “materially identical” to another entity’s products previously held not to infringe the asserted patent); *Fairchild Semiconductor Corp. v. Power*

Integrations, Inc., 2015 U.S. Dist. LEXIS 53327, at *5-6 (D. Del. April 23, 2015) (this Court granting summary judgment of issue preclusion in favor of Fairchild because the “power supplies accused in the two cases are ‘essentially the same’”).

Arlington Indus., Inc. v. Bridgeport Fittings, Inc., 2014 U.S. Dist. LEXIS 56869 (M.D. Pa. 2014) is on point. The court explained that “[i]ssue preclusion does not always require the accused products to be identical, because ‘[i]t is the issues litigated, not the specific claims around which the issues were framed, that is determinative.’” *Id.* at *22-23 (quoting *Westwood Chem., Inc. v. United States*, 525 F.2d 1367, 1372 (Ct. Cl. 1975)). The court granted summary judgment of infringement because “[t]here is absolutely no indication from the record that the structure of the Single and Duplex Connectors differ with respect to the ‘outwardly sprung members’ claim limitation” and because “both parties submitted expert reports that made no distinction between the Single and Duplex Connectors regarding this claim limitation.” *Id.* at *25.

Here, ON’s expert Dr. Zane admitted that [REDACTED]

[REDACTED] In addition, the “two signals” issue that Fairchild lost is the same. The Court should thus grant summary judgment of issue preclusion and infringement with respect to the ’851 patent.

C. ON’s Validity Defense for the ’851 Patent Is Precluded

This Court previously ruled that Fairchild was precluded from challenging the validity of claim 11 of the ’851 patent on obviousness grounds because that claim contained the limitations that had been the focus of Fairchild’s previous, unsuccessful validity challenge: “a frequency variation circuit that provides a frequency variation signal” and “an oscillator that provides an oscillation signal having a frequency range, said frequency of said oscillation signal varying within said frequency range according to said frequency variation signal, said oscillator further providing a maximum duty cycle signal comprising a first state and a second state.” (A1313-1314.) The

asserted claims in this case, reexamination claims 20 and 16, contain these same limitations. (*See* A1018-1023.) Therefore, ON should be precluded just as Fairchild was.¹⁶

ON may respond that it now asserts different prior art—or that it asserts anticipation in addition to obviousness—but this Court has clearly and repeatedly held that invalidity is a single issue, such that if a party loses one invalidity challenge, all other invalidity challenges are likewise precluded. *Galderma Labs., L.P. v. Amneal Pharma., LLC*, 337 F. Supp. 3d 371, 410 (D. Del. 2018); *Fairchild Semiconductor Corp. v. Power Integrations, Inc.*, 2015 U.S. Dist. LEXIS 53327, at *7-8 (D. Del. April 23, 2015); *AstraZeneca*, 905 F. Supp. 2d at 602-603.

The Court should thus grant summary judgment of issue preclusion and no invalidity with respect to the '851 patent.

MOTIONS FOR SUMMARY JUDGMENT DIRECTED TO ON'S SR PATENTS

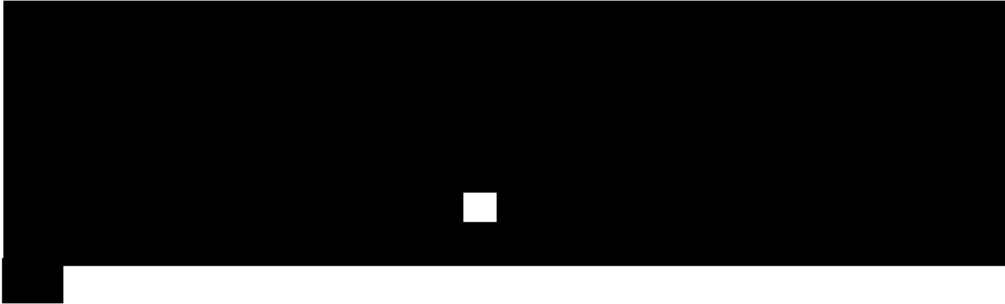
I. NO INFRINGEMENT OF ON'S "SR PATENTS" WHEN THE ACCUSED PRODUCTS ARE NOT USED WITH AN EXTERNAL "SR FET"

Given the admissions of ON's expert that use of the accused chips without an SR switch or FET (*e.g.*, use with a rectifying diode) does not infringe, the Court should grant partial summary judgment of no direct or indirect infringement of the '298, '705, and '407 patents in such instances.

Argument

The parties refer to ON's '298, '705, and '407 patents as the "SR patents" because they all relate to the use of a switch to provide "synchronous rectification." (*See* A1438-1448; A1449-1459; A1460-1488.) ON asserts claims 1, 7, 8, 9 and 11 of the '298 patent; claims 1, 2, 10, and 11 of the '705 patent; and claims 1, 5, 6, 16, and 31 of the '407 patent. (A1491-1493.) ON's expert Dr. Zane explains what "synchronous rectification" is and how it contrasts with alternate techniques:

¹⁶ While the current claims also contain additional limitations, ON would necessarily have to address all limitations together, including the "frequency variation" and "oscillator" limitations, to prevail on validity.



(A1492-1493.)

Since PI's accused products cannot perform synchronous rectification by themselves, ON's expert relies on use of PI's accused products with external "SR FETs" to allege infringement.¹⁷

(*E.g.*, A1494-1495; *see also* A1521, 119:10-120:13

[REDACTED]
[REDACTED]
[REDACTED].) However, PI's accused products can also be used with rectifying diodes instead of SR FETs, as PI instructs its customers to do. (*E.g.*, A1541; A1522-1523, 124:6-125:18.) Furthermore, Dr. Zane admitted that PI's accused products, when used with a rectifying diode instead of an SR FET, *do not infringe* any of the asserted claims of the '298, '705, and '407 patents.

(A1523, 125:19-126:5

[REDACTED]
[REDACTED]
[REDACTED]
see also A1521-1522, 120:14-121:12.)

Given the admissions of ON's expert that use of the accused products with a rectifying diode does not infringe, the Court should enter partial summary judgment that there is no direct or indirect infringement in such instances.

¹⁷ A FET is a field effect transistor, or switch.

II. NO INFRINGEMENT OF THE SR PATENTS BASED ON CLAIM CONSTRUCTIONS THAT PI WON

Because ON's infringement arguments are directly contrary to the Court's construction of "magnetized voltage" and "polarity," the Court should grant partial summary judgment that the accused products do not infringe the asserted claims of ON's '298, '705, and '407 patents.

Argument

The Court's decisions at the claim construction stage resolved key disputes between the parties and should result in partial summary judgment of no infringement.

A. The Court's Construction of "Magnetized Voltage" Results in No Infringement of the '298 and '705 Patents

The Court resolved a key, and dispositive, dispute about the '298 and '705 patents when it adopted PI's construction of "magnetized voltage" to limit the term to a voltage at the output of the transformer or magnetic device "during the magnetization period." (D.I. 110 at 5-6.)

ON's infringement contentions simply ignore the Court's construction. It is undisputed that ON's only alleged use of the "magnetized voltage" in the accused PI products occurs *after* the transformer is no longer being magnetized—that is, the alleged use is of a voltage that only exists *after* and not *during* the magnetization period, contrary to the Court's construction.

For context, all the asserted claims require "generating a control signal in response to a magnetized voltage." (*E.g.*, A1447, claim 1.) According to Dr. Zane, [REDACTED]

[REDACTED] (A1496.) [REDACTED]

[REDACTED] (*Id.*)

Dr. Zane further opines that [REDACTED]

[REDACTED]

[REDACTED] (A1502-1503 (emphasis added);

see also A1527, 214:8-25 [REDACTED]

[REDACTED].)

However, it is not disputed that the negative threshold crossing identified by Dr. Zane—when the FWD pin voltage drops below -24mV—occurs only after the end of magnetization (*i.e.* after the primary switch turns off), not *during the magnetization period* as required by the Court’s claim construction. Dr. Zane admitted in deposition that [REDACTED]

[REDACTED] (A1520, 41:16-42:14 (emphasis added).) He also admitted that it is [REDACTED]

[REDACTED] (A1527, 215:1-216:14.) Dr. Zane’s infringement opinion is thus contrary to the Court’s claim construction because energy is not being *built up* after the primary switch *turns off* and the voltage begins to *drop*.

Indeed, Dr. Zane admitted [REDACTED]

[REDACTED] (A1528-1531, 218:4-219:2; see also *id.* at 219:3-220:11 [REDACTED]

[REDACTED] 224:6-226:24

[REDACTED] 244:8-20 (agreeing [REDACTED]

[REDACTED].) However, contrary to Dr. Zane, “*after*” is not “*during*.”

Dr. Zane also admitted that [REDACTED]

[REDACTED] (A1531, 242:25-243:15

(emphasis added).) However, that is plainly contrary to the Court’s claim construction, which limits “magnetized voltage” to a particular time—“during the magnetization period.”

More generally, Dr. Zane does not dispute *how* the accused products operate. (A1614-1615

[REDACTED]
[REDACTED]
[REDACTED]).¹⁸ Dr. Zane's thesis is that the claim requirement of responding to the "magnetized voltage" can encompass responding to the voltage at the output of the transformer/magnetic device at a time "after" the magnetization period has ended. This is directly contrary to the Court's construction.

The Court should therefore enter partial summary judgment that the accused products do not infringe the asserted claims of the '298 and '705 patents.¹⁹

B. The Court's Construction of "Polarity" Results in No Literal Infringement of the '407 Patent

The Court also resolved a dispositive dispute about the '407 patent when it adopted PI's proposed construction of "polarity" to limit the term to "the negative/positive state of a pulse signal that is a differential signal having both positive and negative magnitudes relative to a common reference." (D.I. 110 at 10-11.) This construction eliminated simple logic signals that can go high or low, by rejecting ON's proposed construction of "a high or low state of the pulse signal(s)." (*See id.* at 10.) The Court stated that it "agrees with Power that the construction should refer to a positive or negative state, because the specification consistently describes the pulse signals as differential signals having positive or negative polarity." (*Id.* at 11.)

ON ignores this adverse ruling, and accuses logic signals that can go high or low but never

¹⁸ As background, Mr. McAlexander explains in his report how the accused products generate a control signal *after* the magnetization period. (A1621-1633; *see also* A1637-1639, 31:23-32:8; 56:20-57:2; 190:17-191:9 (design engineer of the accused products confirming control signal is generated only after the voltage goes negative).)

¹⁹ Although he raises DoE as to other claim limitations, Dr. Zane does not state any opinion with regard to alleged infringement by equivalents of the "magnetized voltage" limitation of the asserted claims of the '298/'705 patents. (A1497-1503, A1508-1513.)

negative. Moreover, ON has no evidence that the accused logic signals are ever combined into a single differential signal.

For context, the asserted claims require a “pulse signal” that “is generated for rectifying and regulating of the power converter” where “the polarity of the pulse signal determines the on/off of the power switch.” (*E.g.*, A1486, claim 1.²⁰) According to Dr. Zane, [REDACTED]

[REDACTED]

[REDACTED] (A1504.)

However, it is clear from Dr. Zane’s admissions that neither of these outputs has polarity. Indeed, Dr. Zane admitted in deposition that [REDACTED]

[REDACTED] (A1524-1525, 160:15-162:17.) He also

admitted that [REDACTED] (A1526, 167:2-24.)

Dr. Zane’s argument instead is that [REDACTED]

But Dr. Zane never shows that the two signals are ever added, subtracted, or combined in any way, and in particular by the latch. Instead, he argues that [REDACTED]

[REDACTED] (A1504 (showing two signals entering latch G.)) What Dr. Zane fails to show is a *single* differential signal—even if it results from the alleged combination of two other signals—that has polarity, and where it is the polarity of that differential signal that sets/resets the latch or determines the on/off state of the power switch. The latch does not add, subtract, or combine signals, and Dr. Zane does not contend otherwise. A latch is instead “a circuit that retains whatever output state results from a momentary input signal until reset by another signal.” (A1641; *see also* A1645 (defining latch as “2. A simple logic storage element. The most basic form consists of two cross-

²⁰ Asserted claim 31 recites “setting or resetting the latch circuit in response to the polarity of the pulse signal” and “turning on/off a power switch in accordance with the status of the latch circuit.”

coupled logic gates that store a pulse applied to one logic input until a pulse is applied to the other input”).) In other words, each of two independent inputs to a latch either set or reset the latch. In the case of PI’s accused products, the AND gate output, which is input to the latch’s S terminal, sets the latch, while the OR gate output, which is input to latch’s R terminal, resets it. [REDACTED]

(A1525, 162:18-163:1.) Moreover, [REDACTED]

[REDACTED] (A1504 (emphasis added).) In this way, Dr. Zane directly contradicts the Court’s construction, making summary judgment of no infringement appropriate.

C. The Court Should Also Grant Summary Judgment of No Infringement Under the Doctrine of Equivalents

Dr. Zane makes an alternative argument regarding “polarity” under the DoE. He asserts [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (A1506-1507, A1514-1515.)

What Dr. Zane is really saying is that any use of two signals to control the on/off of the power switch infringes. This conclusory opinion fails as a matter of law.

The “all elements rule” requires that *all* claim elements must be present even under the doctrine of equivalents. *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005). In other words, the doctrine of equivalents does not permit ON to argue for “overall” equivalency; it must show an equivalent of each claimed element, including the presence of “a differential signal having both positive and negative magnitudes relative to a common reference.” ON has failed this burden.

The “all elements rule” also precludes use of the doctrine of equivalents “if applying the doctrine would vitiate an entire claim limitation.” *Id.* Under this doctrine, “the concept of

equivalency cannot embrace a structure that is specifically excluded from the scope of the claims.” *Dolly, Inc. v. Spalding & Evenflo Companies, Inc.*, 16 F.3d 394, 400 (Fed. Cir. 1994); *Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1335 (Fed. Cir. 2014). Such an equivalency would vitiate the claim’s specific exclusions. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346 (Fed. Cir. 2001) (a metallic device cannot be the equivalent of the claimed “non-metallic” device). Here, arguing that *two* signals—neither of which has “polarity” as construed—are the equivalent of *one, combined* signal that does have polarity, also vitiates the express claim requirements that it is the polarity of the pulse signal that determines the on/off of the power switch (or sets/resets a latch circuit).

Summary judgment is appropriate because both application of the all elements rule and the determination of claim element vitiation is a question of law for the Court. *Panduit Corp. v. HellermannTyton Corp.*, 451 F.3d 819, 826 (Fed. Cir. 2006).

III. NO PRE-SUIT DAMAGES

Because ON has failed to provide evidence that it has complied with the notice and marking provisions of 35 U.S.C. § 287, the Court should enter summary judgment that ON is not entitled to pre-suit damages for the ’298 and ’705 patents.

Argument

35 U.S.C. § 287 requires a patentee to mark its patented products or provide actual notice to the alleged infringer before it can begin accruing damages. In this case, ON has provided no evidence of either marking or actual notice before the original filing of the present litigation (December 27, 2016 in the Eastern District of Texas). Therefore, the Court should enter summary judgment that ON may not obtain pre-suit damages in this case for the ’298 and ’705 patents.

Dr. Zane’s report includes a section opining that [REDACTED]

[REDACTED] (A1516.) Yet ON has provided no evidence that it marked these products, contrary to its burden. *See Arctic Cat Inc. v. Bombardier Recreational Products Inc.*, 876 F.3d 1350, 1366 (Fed. Cir. 2017) (“The patentee bears the burden of pleading and proving he complied with § 287(a)’s marking requirement. . . . Section 287 is thus a limitation on damages, and not an affirmative defense.”).

Likewise, ON has provided no evidence that it gave PI actual notice of alleged infringement before December 27, 2016. (*See* A1648; 1652 (alleging PI became aware of the patents-in-suit by December 27, 2016)); A1654-1664, ON’s response and supplemental response to PI’s interrogatory 15, asking for “any other subject matter ON contends is related to the calculation of a reasonable royalty in this case”). The Court should thus grant summary judgment that ON may not obtain damages before December 27, 2016 for the ’298 and ’705 patents.

MOTION FOR SUMMARY JUDGMENT ON PRE-KNOWLEDGE INFRINGEMENT

ON has not proven infringement for any overseas sales before PI’s first awareness of the asserted patents, which amounts to [REDACTED] of accused sales before December 27, 2016.

Statement of Undisputed Material Facts

1. ON’s damages expert assumes that ON was entitled to damages for all overseas sales re-sold into the U.S. by third parties under an indirect infringement theory (A642-645, ¶¶ 180-181, 255-256), regardless of whether PI had awareness of the patents before ON filed suit. 2. The undisputed date of PI’s first awareness of the patents is December 27, 2016. (A638.) 3. Further, even though the data relied upon by ON’s expert shows that [REDACTED]
[REDACTED], ON’s expert asserts that [REDACTED] (A642-645, ¶¶ 180, 255; A664; *see* A652, 91:3-11.) 4. ON’s expert admitted that he could have used PI’s financial data to calculate direct sales to U.S. customers, but he did not perform that

calculation. (A660, 97:20-98:12.)

Argument

When a product is made and sold overseas, and then imported into the United States, the manufacturer may be found liable for indirect—but not direct—infringement. *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1371-72 (Fed. Cir. 2013). Indirect infringement requires actual knowledge of the patent. *Synqor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1379 (Fed. Cir. 2013). ON has not alleged (much less proven) that PI had actual knowledge of the asserted patents before December 27, 2016. (UDF # 2.) PI therefore cannot be liable for overseas sales before December 27, 2016, and the Court should enter summary judgment of non-infringement with respect to the accused overseas sales before December 27, 2016. *Semiconductor Energy Lab. Co. v. Chi Mei Optoelectronics Corp.*, 531 F. Supp. 2d 1084, 1114 (N.D. Cal. June 19, 2007) (granting summary judgment of no pre-notice inducement where plaintiff “produced no evidence that [defendant] had actual knowledge” before the notice date).

Moreover, the Court should cap the pre-knowledge royalty base for direct infringement to PI’s actual U.S. sales. ON’s expert knew that only a small fraction of PI’s overall product sales occurred in the U.S., and he knew that he could determine the actual number of direct-to-U.S. sales (████) using PI’s financial data. (UDF #3, 4.) Instead, he chose an unreliable proxy—33%—untethered to the facts of the case, inflating the number of pre-knowledge accused sales by a factor of █████. All non-U.S. pre-knowledge sales made outside the U.S. should be excluded from the base.

MOTION FOR SUMMARY JUDGMENT THAT ON CORP. LACKS STANDING

Statement of Undisputed Material Facts

1. SCI “owns title and all rights to” the asserted patents. (D.I. 24, ¶¶ 2, 14.) 2. ON Corp. has never alleged it has any rights in these patents.

Argument

“[T]o assert standing for patent infringement, the plaintiff must demonstrate that it held enforceable title to the patent *at the inception of the lawsuit*.” *Paradise Creations, Inc. v. UV Sales, Inc.*, 315 F.3d 1304, 1309 (Fed. Cir. 2003). Standing “is jurisdictional” and cannot be waived. *Evident Corp. v. Church & Dwight Co.*, 399 F.3d 1310, 1313 (Fed. Cir. 2005) (standing raised on appeal). ON Corp. has produced no evidence that it has *any* rights to the asserted patents—much less “enforceable title.” *See Paradise*, 315 F.3d at 1309. The fact that SCI is its subsidiary is not enough. *See, e.g., Acrisure Holdings, Inc. v. Frey*, C.A. No. 18-1514-RGA-MPT, 2019 U.S. Dist. LEXIS 48639, at *20 & n.134 (D. Del. Mar. 25, 2019) (“Wrongdoing to a subsidiary does not confer standing upon the parent company, even where the parent is the sole shareholder of the subsidiary.”) (citation omitted) (collecting cases). Thus, ON Corp. should be dismissed.

CONCLUSION

For the reasons stated above, the Court should grant partial summary judgment that claims 1 and 9 of ON’s ’211 patent are anticipated; that claims 1, 4, 9, and 10 of ON’s ’211 patent obvious; that the accused eSOP products do not infringe claims 1, 4, 9, or 10 of the ’211 patent; that the accused products do not infringe the asserted claims of the ’211 patent under DoE; that ON infringes the asserted claims of PI’s ’851 patent and that these claims are not invalid, due to issue preclusion; that use of PI’s accused products with a rectifying diode does not infringe ON’s ’298, ’705, and ’407 patents; that PI does not infringe the asserted claims of ON’s ’298, ’705, and ’407 patents based on the Court’s claim constructions; that ON is not entitled to damages before December 27, 2016 for the ’298 and ’705 patents; that ON has not proven infringement for overseas sales of the accused products before December 27, 2016, and therefore ON’s royalty base for sales before December 27, 2016 is limited to [REDACTED] of PI’s worldwide accused sales; and that ON Corp. lacks standing.

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